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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/878,254	06/11/2001	Robert Huusken	ZOU-6	2975

7590 03/27/2003

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EXAMINER

RIBAR, TRAVIS B

ART UNIT	PAPER NUMBER
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1711

4

DATE MAILED: 03/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/878,254

Applicant(s)

HUUSKEN, ROBERT

Examiner

Travis B Ribar

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 3, 4, 11, and 16-20 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The polyurethane (PU) polymers in claims 3, 4, and 16 are not adequately described in the specification. Claims 3, 4, and 16 encompass wide ranges of polyurethane compositions and since the applicant does not give specific examples of either the reactants used to make the claimed PU or chemical examples of the final product PU, one skilled in the art would not be able to make the invention the applicant claims.

3. Claim 11 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Specifically, the claim calls for a resin with a certain solubility. The specification does not describe such an invention. The closest that it comes is on page 8, lines 13-14, where the water solubility of the flame retardant is described.

4. Claims 17-20 are rejected under this heading due to their dependence from claim 16.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 13-16, 18, and 21-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Regarding claim 18, the examiner is not certain how a (meth)acrylate group can comprise part of a (meth)acryloyloxy group or what the applicant considers to be part of a (meth)acryloyloxy group.

8. Claim 13 recites the limitation "the UV absorbers" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

9. Claim 14 recites the limitation "the UV absorber comprising hydroxyphenyl-s-triazine" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

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10. Claim 16 recites the limitation "polyurethane (meth)acrylate" in line 2. There is insufficient antecedent basis for this limitation in the claim.

11. Claim 15 is rejected under this heading due to its dependence from claim 14.

12. Regarding claims 21 and 22, it is unclear from the language of the claim what structure of flame retardant the applicant is claiming. Is the applicant claiming a salt with all of the compounds present, only a salt of the first compound in each group, or another type of structure?

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 1-15 and 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over von Bonin ('527) in view of either Valet et al. or Susi and also in view of the applicant's disclosure in the current specification.

Von Bonin ('527) discloses a polyurethane-containing PU (in the abstract) that includes the pigment (column 10, line 46) and melamine (column 10 lines 32-33) requirements of the base layer in claim 1 along with the material requirements of claim 2 and possibly claims 3 and 4 (see the above enablement rejection). Further, the amount

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of melamine compound is present (column 2, line 29) in the amount the applicant claims in claim 1. Von Bonin ('527) therefore meets the base resin layer requirements of claims 1-4 and 10. However, von Bonin ('527) does not include the clear topcoat that the applicant claims.

The topcoat the applicant claims is present in Valet et al. and Susi. Valet et al. discloses a clear topcoat layer (column 6, line 46) used as a protective coat against light-induced degradation. The topcoat layer includes both hindered amines (column 5, line 22) and UV absorbers (column 1, line 35 to column 2, line 16) in the amounts (column 6, lines 27-28 and column 6, lines 21-26, respectively) the applicant claims in claims 1, 5, and 13-15. Similarly, Susi discloses a protective layer that includes hindered amines (column 11, lines 22-24) and UV absorbers (column 11, lines 33-37 and claim 1) in the amounts (column 11, lines 22-24 and column 11, lines 33-37) of claims 1, 5, and 13-15.

The base resin layer in von Bonin ('527) is coated on a substrate, meeting that aspect of claim 24. The protective layer provided by either Valet et al. or Susi is meant to protect the substrate and any base resin layer beneath it from degradation due to light or environmental effects. The examiner therefore believes that the color change properties in claim 23 are inherent to the multilayer structure taught through the combination of references in this rejection.

Regarding the flame retardant compositions of claims 6-12, the applicant discloses in the specification that compounds with these properties are readily and commercially available as flame retarder agents.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use those flame retarder agents commercially available in the invention in von Bonin ('527). The motivation for doing so would be that the substitution of one flame retarder for another would yield similarly beneficial results. It also would have been obvious to use the topcoat layers taught in either Valet et al. or Susi over the coating layer in von Bonin ('527). The motivation for doing so would be to provide protection to the base resin layer against light and the environment. Therefore it would have been obvious to combine Valet et al. or Susi with von Bonin ('527) to obtain the invention as specified in claims 1-15 and 23-24.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Blount discloses a PU composition that may read on the applicant's claims.

Hall et al. discloses a PU composition that may read on the applicant's claims.

Tomko et al. discloses a method for producing melamine pyrophosphate.

Huglin et al. and Hayoz et al. disclose hydroxyphenyl triazines.

Von Bonin ('364) discloses an intumescent composition.

Weil et al. discloses flame retardant compositions.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Travis B Ribar whose telephone number is (703) 305-3140. The examiner can normally be reached on 8:30-5:00 Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (703) 308-2462. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Travis B Ribar
Examiner
Art Unit 1711

TBR
March 21, 2003


James J. Seidleck
Supervisory Patent Examiner
Technology Center 1700